

2354Z 29 MAY 1963

SECRET

TO : DIRECTOR

25X1A

FROM :

ACTION: OSA (1-15)

INFO : S/C (16)

ROUTINE

IN 7166

25X1A

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TOR: 0125Z 30 MAY 1963

TO

INFO

CITE

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OXCAR

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1. COL LEDFORD AND COL GEARY FROM

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HAS SUBMITTED A SUMMARY OF BOARD PROGRESS TO DATE, 29 MAY 63.

IT IS QUOTED BELOW FOR YOUR INFORMATION.

A. ENGINES: ALL ENGINE ACCESSORIES HAVE BEEN RECOVERED AND SENT TO UAD, CONN. FOR TDR. MAJOR COMPONENTS OF COMPRESSOR AND TURBINE FROM BOTH ENGINES HAVE BEEN EXAMINED FOR ROTATIONAL DAMAGE. LEFT HAND ENGINE SHOWS SUBSTANTIAL ROTATIONAL DAMAGE INDICATIVE OF HIGH RPM AT IMPACT. RIGHT HAND ENGINE SHOWS LITTLE ROTATIONAL DAMAGE INDICATIVE OF LOW RPM AT IMPACT. EXTERNAL EXAMINATION OF ENGINES HAS NOT SHOWN ANY INDICATION ENGINE FAILURE. INVESTIGATION WILL CONTINUE IN AREA OF ACCESSORIES, BASIC ENGINE AND AFTERBURNER, AND FUEL SYSTEM.

B. INS: AT SOME INSTANT OF TIME BEFORE IMPACT, THE INS PLATFORM LOST REFERENCE. THE SYSTEM WAS APPARENTLY FUNCTIONING PROPERLY AS THE INITIAL DECELERATION BEGAN. THERE IS NO EVIDENCE

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OF SYSTEM MALFUNCTION OTHER THAN THE POSSIBLE LOSS OF POWER BETWEEN DECELERATION AND IMPACT. ALL READOUT PANELS WERE JAMMED AT REASONABLE VALUES AND CORRESPOND TO THE APPROXIMATE COORDINATES OF IMPACT. JUDGING FROM THE CONDITION OF THE PLATFORM STABLE ELEMENT, IT WAS INVERTED ON IMPACT, WHICH WOULD NOT BE THE CASE IF THE SYSTEM WERE FUNCTIONING PROPERLY. THE CONDITION OF OTHER ASSOCIATED EQUIPMENT IN THE SYSTEM INDICATES THAT IMPACT OCCURRED IN A NOSE DOWN, INVERTED ATTITUDE. THE INDICATED GROUND SPEED GENERATED BY THE SYSTEM WAS JAMMED AT 308 KNOTS.

C. MAINTENANCE AND AIRCRAFT RECORDS: INSPECTION OF AIRCRAFT MAINTENANCE RECORDS DID NOT REVEAL ANY FACTOR WHICH IS CONSIDERED CONTRIBUTORY TO THE CAUSE OF THE ACCIDENT.

D. OPERATIONS GROUP: CREW REST, PHYSICAL CONDITION, PSYCHOLOGICAL FACTORS AND QUALIFICATIONS HAVE BEEN STUDIED AND DO NOT APPEAR TO BE A FACTOR IN THE ACCIDENT. WEATHER WAS AS FORECAST AND DOES NOT APPEAR TO HAVE BEEN A PRIMARY CAUSE, BUT MAY HAVE CONTRIBUTED TO THE ACCIDENT. THE PLANNED GROUND TRACK WAS FLOWN ESSENTIALLY AS BRIEFED WITH ALTITUDE MODIFICATIONS DUE TO CLOUD CONDITIONS. WEATHER OVER CHECK POINTS PRECLUDED VISUAL IDENTIFICATION OF AUSTIN, NEVADA DURING BOTH CIRCUITS OF THE ROUTE AND ALSO OF WENDOVER, UTAH, DURING THE SECOND CIRCUIT. VISUAL IDENTIFICATION OF OTHER CHECK POINTS CONFIRMED PROPER OPERATION OF INS. DURING LAST TURN OVER WENDOVER, UTAH

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THE AIR DATA COMPUTER MACH READOUT WAS OBSERVED TO INDICATE SUPER-SONIC FLIGHT. INSTINCTIVE CORRECTIONS TO REDUCE AIR SPEED WERE ATTEMPTED. A BLEED-OFF OF EQUIVALENT AIR SPEED RESULTED. LEVEL OFF AND THROTTLE ADVANCEMENT FAILED TO CHECK AIR SPEED BLEED OFF. MILD PITCH CORRECTIONS FAILED TO CHECK AIR SPEED BLEED OFF AND THE AIRCRAFT DESCENDED INTO THE CLOUDS IN A WING LEVEL ALTITUDE. LOSS OF CONTROL OCCURRED AT 101 KEAS AND RECOVERY EFFORTS WERE UNSUCCESSFUL AND THE PILOT ABANDONED THE AIRCRAFT. OXYGEN SYSTEMS APPEARED TO FUNCTION NORMALLY, OXYGEN MOISTURE CHECKS FROM THE SOURCE USED TO SERVICE THIS AIRCRAFT ARE NEGATIVE, HOWEVER, PURITY CHECKS ARE NOT COMPLETE.

E. FLIGHT CONTROLS: THE FLIGHT CONTROL SYSTEM APPEARS TO HAVE BEEN INTACT AND OPERABLE TO THE POINT OF IMPACT. THE ELEVON TRIM WAS RECOVERED IN THE FULL NOSE DOWN POSITION. THE COCKPIT THROTTLE CONTROLS WERE FOUND AT THE 93 PERCENT RPM POSITION - .75 INCHES FROM THE 98 PERCENT POSITION.

F. INSTRUMENTS: MOST INSTRUMENTS HAVE BEEN LOCATED, BUT READINGS CANNOT BE DETERMINED UNTIL MECHANISM DISPLACEMENTS ARE ANALYZED.

G. OXYGEN AND PRESSURIZATION: THE OXYGEN DRYNESS HAS BEEN CHECKED OUT MINUS 85 DEGREES F DEW POINT. THE DUAL OXYGEN SYSTEMS AT THIS TIME DO NOT SHOW ANY EVIDENCE OF MALFUNCTION. OXYGEN PURITY IS BEING CHECKED IN THE LABORATORY.

H. ELECTRICAL: BASED UPON THE PILOTS REPORT OF THE COCKPIT CONDITION, NO ELECTRICAL MALFUNCTION IS EXPECTED. THE STATE OF THE DEBRIS MAKES IT IMPOSSIBLE TO DETERMINE THIS.

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I. FUEL: SAMPLES OF TYPICAL FUEL USED IN THIS FLIGHT AND FUEL FROM AIRPLANE 124 ARE BEING ANALYZED FOR WATER CONTENT. THE FUEL STRAINERS ARE SEALED FOR LABORATORY CHECK OF WATER CONTENT. THESE SYSTEMS ARE STILL BEING INVESTIGATED TO EXPLAIN LOW FUEL FLOWS (1800 PPH).

J. STRUCTURE: THE AIRCRAFT STRUCTURE, INTACT EXCEPT FOR ITEMS LISTED BELOW STRUCK THE GROUND IN AN INVERTED ATTITUDE. THERE DOES NOT APPEAR TO HAVE BEEN ANY PRIMARY STRUCTURAL FAILURE. THESE ITEMS LEFT THE STRUCTURE BEFORE IMPACT:

- (1) PILOT'S CANOPY
- (2) PILOT'S SEAT AND JETTISONING HARDWARE.
- (3) MISCELLANEOUS PIECES OF COCKPIT TRIM, INSULATION, RECORDER AND FLIGHT CORDS.
- (4) SMALL FRAGMENTS OF HONEYCOMB MATERIAL.

2. RECOMMENDATIONS:

A. EVEN THOUGH THE FOLLOWING ITEMS MAY OR MAY NOT HAVE CONTRIBUTED TO THE ACCIDENT UNDER INVESTIGATION, IT IS RECOMMENDED THAT THE FOLLOWING ACTIONS BE TAKEN PRIOR TO CONTINUATION OF FLYING WITH 121 AND 124.

(1) RECONFIGURE THE ELECTRICAL SYSTEM SO THAT INVERTOR NUMBER TWO WILL AUTOMATICALLY AND, IF NECESSARY, MANUALLY CHANGE OVER TO REPLACE A FAILURE ON NUMBER ONE INVERTOR. THIS IS BEING DONE. LAC WILL GIVE BOARD A STATUS REPORT 3 JUNE ON THIS SUBJECT.

(2) INSTALL A CRASH RESISTANT FLIGHT RECORDER FOR USE DURING TEST AND TRAINING PHASES OF THIS PROGRAM THAT WILL MEASURE

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ALL PRIMARY SOURCES OF FLIGHT DATA. LAC WILL GIVE BOARD A STATUS REPORT 3 JUNE ON THIS SUBJECT.

(3) INSTALL AN ANGLE OF ATTACK INDICATOR IN ALL AIRCRAFT. DATA ALREADY AVAILABLE IN 121. INSTALLATION OF INDICATOR WILL BE ACCOMPLISHED.

(4) RESTRICT SUBSONIC FLIGHTS IN LOW TEMPERATURE ENVIRONMENTAL CONDITIONS TO TIME EQUAL TO TEST FLIGHT TIMES ACCOMPLISHED BY THE CONTRACTOR UNTIL FURTHER TESTS ARE MADE TO DETERMINE POSITIVE TEMPERATURE SINK OF FUEL AT CRITICAL POINTS.

NOTE: FLIGHTS ON AIRCRAFT 124 COULD BE CONTINUED WITHOUT ACCOMPLISHMENT OF (2) AND (3) ABOVE UNTIL HARDWARE IS AVAILABLE PROVIDED TWO RATED PILOTS ARE ABOARD.

B. RECOMMENDATIONS REGARDING 122, 125, 126 AND 127 ARE WITHHELD PENDING FURTHER FINDINGS BY THE BOARD AND INVESTIGATIONS BY THE CONTRACTOR OVER THE WEEKEND.

END OF MESSAGE

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